

The Knowledge Bank at The Ohio State University
Ohio State Engineer

Title: Back Matter

Issue Date: Nov-1934

Publisher: Ohio State University, College of Engineering

Citation: Ohio State Engineer, vol. 18, no. 2 (November, 1934).

URI: <http://hdl.handle.net/1811/35174>

Appears in Collections: [Ohio State Engineer: Volume 18, no. 2 \(November, 1934\)](#)

In A Jointless-Minded World

Welding would prevail—and old methods of joining could not be restored to favor.

By E. A. DOYLE*

If welding had become the standard method of manufacture before mechanical types of joints were introduced, it would be difficult, indeed, to convince manufacturers that they should redesign their metal products to use mechanical methods of joining.



NO RETREAT—pipe line constructors would never consent to a change from simple, portable welding equipment to the complicated devices essential to other methods.

Welding Gives Strength

Strength would be a talking point for welding. The welded joint is strong as or stronger than the metal which it joins. The cutting of holes for screws or bolts would naturally weaken the structure. Appearance gives welding another vote. Joints made by welding are smooth in contour and have no depressions, bosses,

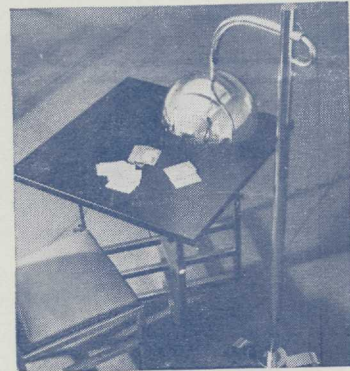
projections or attachments as is often necessary in mechanical means of joining metals.

Costs Less to the User

Cost would be another argument for welded joints. The greater amount of material necessary with mechanical joints, the increased weight, and the decrease in pay load or performance-to-weight ratio, would make welding the preferred method. Nobody would consent to a joint in piping, which might, through a tiny leak cost much more than the permanently leakproof welded joint. Nor should it be necessary to buy expensive machinery to make mechanical joints which welding can equal in performance, economy and adaptability with a minimum investment in metal fabricating equipment.

Modernizes Automobile Design

Automobile manufacturers would insist on welding rather than consent to a return to the design limitations imposed by mechanical joints. In face of a change from "teardrop" designs to the old boxlike bodies, with the attendant discomforts, with higher cost due to increased gas con-

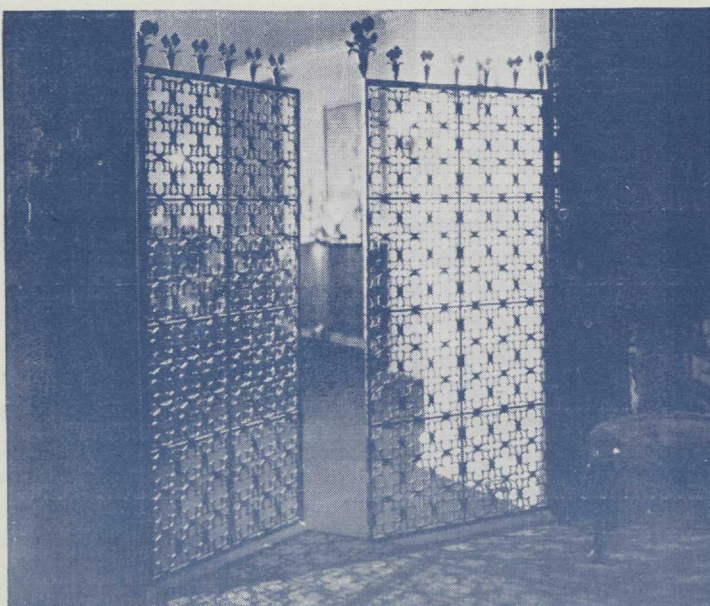


METAL FURNITURE—The welded joints in metal beds, chairs and other similar furniture assure a sturdy and rigid assembly.

sumption and increased tire wear, with the fear of accidents increased by the lack of confidence in the joints, with appearance impaired and lacking the smooth surface for fine paint and lacquer finishes,—the automobile manufacturer would hesitate long before any but welded joints would even get a hearing.

In the Future

Farsighted industrial executives can appreciate that a completely "welding-minded" industrial world is not far off. They should use in their own manufacturing operations as many of the advantages of welding as possible. The welding engineers of The Linde Air Products Company can advise how oxy-acetylene welding could best be used in your plant. This service is obtainable without cost or obligation by application to any of the sales offices of The Linde Air Products Company located at Atlanta, Baltimore, Birmingham, Boston, Buffalo, Butte, Chicago, Cleveland, Dallas, Denver, Detroit, El Paso, Houston, Indianapolis, Kansas City, Los Angeles, Memphis, Milwaukee, Minneapolis, New Orleans, New York, Philadelphia, Phoenix, Pittsburgh, Portland, Ore., St. Louis, Salt Lake City, San Francisco, Seattle, Spokane, and Tulsa. Everything for oxy-acetylene welding and cutting—including Linde Oxygen, Prest-O-Lite Acetylene, Union Carbide and Oxyweld Apparatus and Supplies—is available from Linde through plants and warehouse stocks, everywhere.

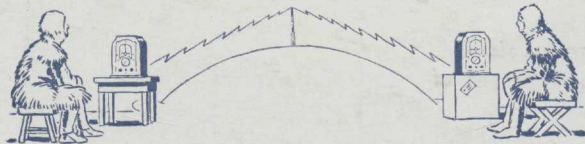


BEAUTIFUL USEFULNESS—typified in this welded ornamental iron gateway. Every joint is strong, sound and was made inexpensively.

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—This being a Business-News Advertisement.

G-E Campus News



TWO POLES IN ONE

Radio entertainment and "airmail" have been sent to the Antarctic through General Electric's short-wave station W2XAF, ever since Rear Admiral Byrd arrived there last year. Recently, in conjunction with a Byrd program, another was sent out to Rockwell Kent and his son in the Arctic region—thus linking simultaneously Americans who are, in the matter of latitude, farthest apart. Governor McNutt of Indiana and other prominent Hoosiers spoke to the Byrd Expedition from Indianapolis in a program sponsored by the *Indianapolis Star*. Immediately afterward, the Coffee House Club, an organization of artists and writers to which Rockwell Kent belongs, sent music and greetings from New York to him on the island of Upekjent, just off the coast of Greenland, 600 miles within the Arctic circle. Features of this program were special greetings from Mrs. Kent and her daughter, and a talk in the Eskimo language by Vilhjalmar Steffanssen, Arctic explorer, for the benefit of the natives. Both programs were broadcast over a coast-to-coast NBC network as well as by short waves.



GOOD-BYE, SMOKESTACK

For many years, the old central heating plant at Mt. Holyoke College in Massachusetts, with its tall, unsightly smokestack, barred the way to certain necessary improvements and landscape developments on the campus. This summer the old boilers and the smokestack were torn down. In one of the buildings of the old plant stand 120 General Electric oil furnaces arranged in circular groups of five. Fifty-two more G-E oil furnaces are installed in the smaller or more isolated buildings of the campus, operating singly, in pairs, and, in one instance, in a battery of 10. In the central plant, only as many groups of

furnaces will operate as are necessary to maintain the required steam pressure. The remainder will be shut down, avoiding stand-by losses. The individual furnaces and small groups in distant buildings permit the abandonment of some of the longer runs in the underground steam-distribution network. The high efficiency of the system is expected to produce savings which will pay for the installation in five to seven years. In addition, as a result of the more careful regulation of temperature, it is expected that health conditions at the college will be considerably improved.

The main plans for the system were drawn up by C. W. Colby, consulting engineer. D. W. McLenegan, Wisconsin, '21, assistant engineer of the Air Conditioning Department; W. O. Lum, and H. R. Crago, Penn State, '18, both of the same department, handled engineering details for General Electric.



FLYING POWER PLANT

Cold was discovered in 1925 along the Bulola River in New Guinea, an island just north of Australia. Prospectors worked the richer veins by hand methods, and packed their "take" on the backs of natives through 40 miles of cannibal-infested and nearly impassable jungles to Lae on the coast. After the best veins had been worked out, it became apparent that placer operations on a large scale would pay if the necessary dredges and other machinery could be brought to the location. Land transportation was impossible, so a plane was sent in. The pilot found a spot to land, and a flying field was cleared off.

Four 875-kv-a. General Electric waterwheel generators were among the equipment ordered. When they arrived at Lae, they were transferred to huge all-metal Junkers freight planes and flown to the location piece by piece. The largest single pieces had a net weight of 6545 pounds. As the load limit of the planes is 7000 pounds, it was a tight squeeze. D. B. Gearhart, Iowa State, '27, of International General Electric, Inc., handled the order for the Company.

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